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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,404	11/05/1999	ATSUSHI MATSUMOTO	862.3194	3919

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EXAMINER
POKRZYWA, JOSEPH R

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 March 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10-17 and 26-28* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-17 and 26-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 3/7/06 has been entered.

Response to Amendment

2.   Applicant's amendment was received on 3/7/06, and has been entered and made of

record. Currently, **claims 1-7, 10-17, and 26-28** are pending.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

4.   **Claims 1-7, 10-17, and 26-28** are rejected under 35 U.S.C. 102(e) as being anticipated

by Miyake (U.S. Patent Number 6,157,749)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding *claim 1*, Miyake discloses an image processing apparatus (column 5, line 52-column 6, line 29), comprising generation means for generating a bitmap image on the basis of inputted object data (column 12, lines 12-62), hold means for holding attribute information representing attributes of the inputted object data in units of pixels of a bitmap image generated by the generation means (column 9, lines 7-57), the attribute information being formed by allocating plural bits of each pixel of the bitmap image and each of the plural bits indicating a different type of attribute respectively (see Fig. 6), conversion means for converting the bitmap image generated by the generation means into data capable of being processed by an image output unit (column 6, line 18-column 7, line 8, and column 12, lines 12-51), and switch means (column 11, lines 53-65) for switching the contents of processing for each pixel of the bitmap image in the conversion means on the basis of the plural bits of attribute information held by the hold means corresponding to that pixel (column 12, lines 12-51), wherein the number of bits used, from the plural bits of the attribute information, by the switch means is different in accordance with characteristics of image processing to be performed (column 6, lines 12-29, column 9, lines 24-57, and column 12, lines 12-51).

Regarding *claim 2*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the holding means holds an attribute map in which the attribute information

is arranged for each pixel corresponding to a two-dimensional coordinate position of the bitmap

image (column 5, line 63-column 6, line 50, and column 19, line 34-column 20, line 41).

Regarding *claim 3*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the holding means embeds the attribute information into bits of a part of each

pixel data of the bitmap image (column 5, line 63-column 6, line 50, and column 11, line 47-

column 12, line 44).

Regarding *claim 4*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the attribute information includes information representing whether object

data corresponding thereto has the form of bitmap data or the form of vector data (see Figs. 13

and 14, and column 11, lines 13-52).

Regarding *claim 5*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the conversion means includes processing for converting a bitmap image

generated by the generation means into binary data using a dither matrix (column 2, lines 42-55,

and column 8, lines 28-67), and the switch means changes the dither matrix used in the

conversion means on the basis of the attribute information (column 2, lines 42-55, column 8,

lines 28-67, and column 11, line 53-column 12, line 44).

Regarding *claim 6*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the generation means generates a bitmap image based on RGB color space,

the conversion means includes color conversion processing for converting each pixel data of the

bitmap image into pixel data represented by YMCK color space (column 23, line 48-column 24,

line 37), and the switch means changes an algorithm of the color conversion processing on the

basis of the attribute information held by the hold means (column 11, line 53-column 12, line 65,

and see column 21-column 23).

Regarding *claim 7*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the attribute information is configured by a plurality of bits (column 5, line

63-column 6, line 50, and column 11, line 47-column 12, line 44), and the switch means switches

the contents of processing of the conversion means in accordance with a combination of

ON/OFF states of those bits (column 11, line 53-column 12, line 44, and column 15, lines 4-61).

Regarding *claim 10*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the object data is represented by page description language (column 5, line

52-column 6, line 44, column 16, lines 9-53, wherein an input object represented by page

description language is inherently included in "images circulated on the internet or images wit a

small information amount").

Regarding *claim 11*, Miyake discloses a storage medium storing a control program for

image processing (column 5, line 52-column 6, line 29), the control program comprising codes

for a generation process for generating a bitmap image on the basis of object data inputted

(column 12, lines 12-62), codes for a holding process for holding attribute information

representing attributes of the object data in units of pixels of a bitmap image generated in the

generation process for holding in a memory (column 9, lines 7-57), the attribute information

being formed by allocating plural bits of each pixel of the bitmap image and each of the plural

bits indicating a different type of attribute respectively (see Fig. 6), codes of a conversion

process for converting the bitmap image generated in the generation process into data capable of

being processed by an image output unit (column 6, line 18-column 7, line 8, and column 12,

lines 12-51), and codes of a switching process (column 11, lines 53-65) for switching the

contents of processing for each pixel of the bitmap image in the conversion process on the basis

of the plural bits of attribute information corresponding to that pixel (column 12, lines 12-51),

wherein the number of bits used, from the plural bits of the attribute information, in execution of

the codes of the switching process is different in accordance with characteristics of image

processing to be performed (column 6, lines 12-29, column 9, lines 24-57, and column 12, lines

12-51).

Regarding *claim 12*, Miyake discloses an image processing system having a host device

and an image output unit (column 5, line 52-column 6, line 29), comprising generation means for

generating a bitmap image on the basis of inputted object data (column 12, lines 12-62), hold

means for holding attribute information representing attributes of the inputted object data in units

of pixels of a bitmap image generated by the generation means (column 9, lines 7-57), the

attribute information being formed by allocating plural bits of each pixel of the bitmap image

and each of the plural bits indicating a different type of attribute respectively (see Fig. 6),

conversion means for converting the bitmap image generated by the generation means into data

capable of being processed by an image output unit (column 6, line 18-column 7, line 8, and

column 12, lines 12-51), and switch means (column 11, lines 53-65) for switching the contents of

processing for each pixel of the bitmap image in the conversion means on the basis of the plural

bits of attribute information held by the hold means corresponding to that pixel (column 12, lines

12-51), wherein the number of bits used, from the plural bits of the attribute information, by the

switch means is different in accordance with characteristics of image processing to be performed

(column 6, lines 12-29, column 9, lines 24-57, and column 12, lines 12-51).

Regarding *claim 13*, Miyake discloses the system discussed above in claim 12, and

further teaches that the attribute information includes information organized hierarchically

(column 5, line 63-column 6, line 50, column 7, line 9-column 8, line 27,and column 11, line 47-

column 12, line 44), and wherein there are one or more units of attribute information of low

order concept which is subordinate to that of high order concept (column 5, line 63-column 6,

line 50, column 7, line 9-column 8, line 27,and column 11, line 47-column 12, line 44).

Regarding *claim 14*, Miyake discloses the system discussed above in claim 12, and

further teaches that the attribute information contains information representing whether object

data corresponding thereto represents a monochrome or a color object (column 13, line 36-

column 14, line 23).

Regarding *claim 15*, Miyake discloses the system discussed above in claim 12, and

further teaches that the attribute information contains information representing whether object

data corresponding thereto represents a character or any kind of object other than characters

(column 5, line 63-column 6, line 50, column 7, line 9-column 8, line 27,and column 11, line 47-

column 12, line 44).

Regarding *claim 16*, Miyake discloses the system discussed above in claim 12, and

further teaches that the attribute information contains information representing whether it has a

single bit or a plurality of bit strings (column 5, line 63-column 6, line 50, column 7, line 9-

column 8, line 27,and column 11, line 47-column 12, line 44) and whether or not it is a ground,

and wherein the conversion means omits processing for a pixel which is a ground (column 5, line

63-column 6, line 50, column 7, line 9-column 8, line 27,and column 11, line 47-column 12, line

44).

Regarding *claim 17*, Miyake discloses an image processing method (column 5, line 52-

column 6, line 29), comprising the steps of generating a bitmap image on the basis of inputted

object data (column 12, lines 12-62), holding in a memory attribute information representing

attributes of the inputted object data in units of pixels of a bitmap image generated in the

generating step (column 9, lines 7-57), the attribute information being formed by allocating

plural bits of each pixel of the bitmap image and each of the plural bits indicating a different type

of attribute respectively (see Fig. 6), converting the bitmap image generated in the generating

step into data capable of being processed by an image output unit (column 6, line 18-column 7,

line 8, and column 12, lines 12-51), and switching the contents of processing for each pixel of

the bitmap image in the converting step on the basis of a combination of the plural bits of

attribute information held in the holding step corresponding to that pixel (column 11, lines 53-65,

and column 12, lines 12-51), wherein the number of bits used, from the plural bits of the attribute

information, in the switching step is different in accordance with characteristics of image

processing to be performed (column 6, lines 12-29, column 9, lines 24-57, and column 12, lines

12-51).

Regarding *claim 26*, Miyake discloses an image processing apparatus (column 5, line 52-

column 6, line 29), comprising a bitmap generator, arranged to receive inputted object data and

to produce a corresponding bitmap image (column 12, lines 12-62), a data holding unit, arranged

to hold attribute information representing attributes of the inputted object data in units of pixels

of a bitmap image generated by the bitmap generator (column 9, lines 7-57), the attribute

information being formed by allocating plural bits of each pixel of the bitmap image and each of

the plural bits indicating a different type of attribute respectively (see Fig. 6), a converter adapted

to convert the bitmap image generated by the bitmap image generator into data capable of being

processed by an image output unit (column 6, line 18-column 7, line 8, and column 12, lines 12-

51), and a switch unit (column 11, lines 53-65), adapted and arranged to switch the contents of

processing for each pixel of the bitmap image in the converter on the basis of a combination of

the plural bits of attribute information corresponding to that pixel (column 12, lines 12-51),

wherein the number of bits used, from the plural bits of the attribute information, by the switch

unit is different in accordance with characteristics of image processing to be performed (column

6, lines 12-29, column 9, lines 24-57, and column 12, lines 12-51).

Regarding *claim 27*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that the characteristics of image processing to be performed indicate when

importance is attached to either cost or image quality (column 2, line 58-column 4, line 25, and

column 6, line 1-column 7, line 8).

Regarding *claim 28*, Miyake discloses the apparatus discussed above in claim 1, and

further teaches that attribute information which is more frequently used is located in the lower

bits and attribute information is hierarchically retained (column 5, line 63-column 6, line 50,

column 7, line 9-column 8, line 27,and column 11, line 47-column 12, line 44).

Citation of Pertinent Prior Art

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

      Miyake (U.S. Patent Number 5,760,921) discloses an image processing system that

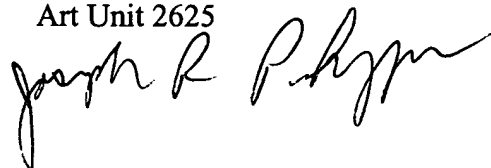converts low-resolution information into high-resolution information.

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joe Pokrzywa whose telephone number is (571) 272-7410. The

examiner can normally be reached on Monday-Friday, 9:00-5:00.

      If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

      Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                            Joseph R. Pokrzywa
                                            Primary Examiner
                                            Art Unit 2625

jrp